

Message Text

UNCLASSIFIED

PAGE 01 NEW DE 05405 221313Z

51

ACTION OES-05

INFO OCT-01 NEA-09 ISO-00 ACDA-10 CIAE-00 DODE-00 PM-03

INR-07 L-02 NSAE-00 NASA-02 NSC-05 EUR-12 SS-15 PA-02

USIA-15 PRS-01 SP-02 CCO-00 OTPE-00 EB-07 FCC-02

OC-05 COME-00 BIB-01 HEW-06 /112 W

----- 118567

R 221211Z APR 75

FM AMEMBASSY NEW DELHI

TO SECSTATE WASHDC 8271

INFO AMEMBASSY ISLAMABAD

AMCONSUL CALCUTTA

AMCONSUL BOMBAY

AMCONSUL MADRAS

UNCLAS NEW DELHI 5405

DEPT PASS TO NASA

E.O. 11652: N/A

TAGS: TSPA NASA IN

SUBJECT: USSR LOFTS INDIAN-MADE SATELLITE

REF: A-145 DATED APRIL 19, 1975

1. THE FIRST INDIAN SATELLITE, DESIGNED AND BUILT AT THE SPACE RESEARCH CENTER NEAR BANGALORE, WAS SUCCESSFULLY LAUNCHED BY A SOVIET INTERCOSMOS ROCKET FROM A SOVIET COSMODROME IN CENTRAL ASIA AT 1:00 P.M. INDIAN STANDARD TIME, SATURDAY APRIL 19, 1975. THIS WAS EXACTLY ELEVEN MONTHS AFTER INDIA DETONATED ITS FIRST ATOMIC DEVICE ON MAY 18, 1974.

2. ACCORDING TO OFFICIAL REPORTS FROM GROUND TRACKING STATIONS IN SRIHARIKOTA NEAR MADRAS, AND BEARS LAKE NEAR THE OUTSKIRTS OF MOSCOW, ALL THE INSTRUMENTS ON BOARD ARE RUNNING SMOOTHLY AND SIGNALS ARE BEING RECEIVED CLEARLY DURING THE FIRST 24 HOURS OF ORBITING. THE
UNCLASSIFIED

UNCLASSIFIED

PAGE 02 NEW DE 05405 221313Z

SATELLITE, NAMED ARYABHATA, AFTER THE INDIAN ASTRONOMER

AND MATHEMATICIAN OF THE FIFTH CENTURY, WEIGHS 360 KILOS AND IS 26-FACED DIAMOND SHAPED BLUE-AND-VIOLET. THE SATELLITE WAS LAUNCHED AT A MAXIMUM ALTITUDE OF 620 KILOMETERS AND A MINIMUM ALTITUDE OF 564 KILOMETERS AND WILL CIRCLE THE EARTH EVERY 96.41 MINUTES WITH A SPEED OF ABOUT 8 KILOMETERS A SECOND.

3. A TASS MESSAGE FROM MOSCOW SAID THAT THE SATELLITE NOW CONTROLLED JOINTLY BY INDIAN AND SOVIET SCIENTISTS, WOULD BE HANDED OVER TO INDIA IN THREE DAYS. THE PRIME MINISTER, IN A STATEMENT TO THE PRESS ON SATURDAY, PROCLAIMED THAT THE ENTIRE DESIGN, FABRICATION, AND TESTING OF THE SATELLITE AND ALL OF ITS SUB-SYSTEMS AND GROUND FACILITIES FOR TRACKING AND TELECOMMAND SYSTEMS HAVE BEEN DONE BY ISRO SCIENTISTS. SHE ALSO COMPLIMENTED THE SOVIET UNION FOR ITS HELP IN THE LAUNCHING OF THE SPACECRAFT.

4. THE SATELLITE IS EXPECTED TO REMAIN IN OPERATION FOR ABOUT SIX MONTHS AND WILL CARRY OUT EXPERIMENTS DESIGNED BY THE INDIAN ISRO SCIENTISTS IN THE FIELD OF X-RAY ASTRONOMY FOR THE DETECTION AND STUDY OF X-RAY EMISSION FROM OUTER SPACE, OF SOLAR NEUTRON AND GAMMA RAYS EMANATING FROM THE SUN, AND OF AERONOMY, INCLUDING THE IONOSPHERE WHICH WOULD BE USEFUL IN RADIO COMMUNICATIONS. THERE ARE THREE TRACKING STATIONS WHERE DATA TRANSMITTED BY THE SATELLITE WILL BE RECEIVED; SRIHARIKOTA, ANDHRA PRADESH, INDIA. A SOVIET COSMOS STATION NEAR MOSCOW, AND A SPACE CENTER IN FRANCE.

5. ACCORDING TO DETAILS RELEASED TO THE PRESS BY THE GOI, THE SPACECRAFT MEASURES 160 CENTIMETERS IN HEIGHT, AND IS STABILIZED BY MEANS OF A SPIN SYSTEM CONSISTING OF SIX ONBOARD SPHERICAL TITANIUM CONTAINERS FILLED WITH COMPRESSED NITROGEN GAS AND CONNECTED TO A PAIR OF NOZZLES AT DIAMETRICALLY OPPOSED ENDS OF THE SATELLITE FRAME. WHEN THE SATELLITE IS EJECTED FROM THE LAUNCHING ROCKET, THE SATELLITE RELEASES GAS AUTOMATICALLY AND AFTER A MINUTE, THE SECOND CONTAINER WILL REPEAT THE OPERATION. THESE JETS SET THE SATELLITE SPINNING AT 90 REVOLUTIONS PER MINUTE. AS THE GAS

UNCLASSIFIED

UNCLASSIFIED

PAGE 03 NEW DE 05405 221313Z

IN THE VESSELS IS DEPLETED IN ABOUT SIX MONTHS, THE OPERATIONAL LIFE OF A SATELLITE WILL END. THE ELECTRICAL POWER NEEDED BY THE SATELLITE IS PROVIDED BY SOLAR PANELS COMPOSED OF 18,500 SOLAR CELLS MOUNTED ON THE OUTER SIDE OF THE SATELLITE.

6. ACCORDING TO PRESS REPORTS, NEARLY 250 INDIAN SCIENTISTS AND TECHNICAL PERSONNEL WORKING AT THE INDIAN SPACE RESEARCH

CENTER AT PEENYA NEAR BANGALORE, HAD DESIGNED AND FABRICATED THE SATELLITE AND PERFECTED ITS ELECTRONIC SYSTEMS BEFORE THE SPACECRAFT WAS TAKEN TO MOSCOW FOR LAUNCHING UNDER AN AGREEMENT SIGNED IN 1972 WITH THE SOVIET UNION. THE FABRICATION OF THE INSTRUMENTS FOR COMMANDING THE SATELLITE FROM THE VARIOUS GROUND STATIONS, WAS REPORTED, TO BE ACHIEVED INDIGENOUSLY. HOWEVER, SOVIET ASSISTANCE WAS REQUIRED TO OBTAIN CERTAIN ELEMENTS OF THE SATELLITE THAT COULD NOT BE MANUFACTURED IN INDIA.

7. THE SUCCESSFUL LAUNCHING OF THE FIRST INDIAN SATELLITE WAS THE RESULT OF EFFORTS BY DR. VIKRIM SARABHAI, FORMER CHAIRMAN OF THE ATOMIC ENERGY COMMISSION, WHO DIED IN 1972. AT THAT TIME, SPACE ACTIVITIES WERE SEPARATED FROM THE ATOMIC ENERGY COMMISSION AND BROUGHT UNDER THE SPACE COMMISSION WHICH IS NOW HEADED BY PROFESSOR SATISH DHAWAN. HOWEVER, THE PRIME MINISTER HOLDS THE MINISTRY PORTFOLIO FOR SPACE. PROFESSOR DHAWAN EXPLAINED ON SATURDAY THAT INDIA'S INTEREST IN SPACE IS TO UTILIZE THE BENEFITS THAT SATELLITES CAN OFFER FOR THE COUNTRY'S DEVELOPMENT, SUCH AS REMOTE SENSING AND THE TRANSMISSION OF EDUCATIONAL PROGRAMS. HOWEVER, HE REMARKED, SATELLITES THAT SOPHISTICATED WILL TAKE SOME TIME TO BUILD. HE INDICATED THAT THE DEVELOPMENT OF THE FIRST SATELLITE COST A TOTAL OF RS. 50 MILLION. HE SAID THAT INDIAN ENGINEERS IN THUMBA, SOUTH INDIA, ARE WORKING ON A ROCKET THAT WILL BE ABLE TO LAUNCH A 40 KILO INDIAN SATELLITE BY 1978. A FOUR STAGE SATELLITE LAUNCH VEHICLE (SLV-3) IS BEING DESIGNED FOR THIS PURPOSE. THE SATELLITE (RS-1) THAT THIS ROCKET WILL CARRY WILL PRIMARILY BE USED TO MONITOR THE PERFORMANCE OF THE ROCKET AND THE SATELLITE ITSELF. AS COMPARED TO THE 300 KG. ARYABHATA, THE RS-1 WILL ONLY DO SOME SMALL PIGGYBACK EXPERIMENTS.

UNCLASSIFIED

UNCLASSIFIED

PAGE 04 NEW DE 05405 221313Z

8. DISCUSSIONS ARE NOW BEING HELD WITH THE SOVIET UNION FOR FACILITIES TO LAUNCH A SECOND SATELLITE. INDIAN SCIENTISTS HAD PREPARED TWO FLIGHT MODELS OF THE ARYABHATA SO THAT THE SECOND MODEL WOULD BE AVAILABLE AT SHORT NOTICE IF THE FIRST ONE FAILED. ACCORDING TO INDIAN SPACE OFFICIALS, THE SECOND SATELLITE WILL BE CONVERTED TO REMOTE SENSING FOR SURVEYING THE EARTH'S RESOURCES.SAXBE

UNCLASSIFIED

NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01 JAN 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: SATELLITES
Control Number: n/a
Copy: SINGLE
Draft Date: 22 APR 1975
Decaption Date: 01 JAN 1960
Decaption Note:
Disposition Action: n/a
Disposition Approved on Date:
Disposition Authority: n/a
Disposition Case Number: n/a
Disposition Comment:
Disposition Date: 01 JAN 1960
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1975NEWDE05405
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Film Number: D750141-0024
From: NEW DELHI
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1975/newtext/t19750428/aaaabanw.tel
Line Count: 162
Locator: TEXT ON-LINE, ON MICROFILM
Office: ACTION OES
Original Classification: UNCLASSIFIED
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 3
Previous Channel Indicators: n/a
Previous Classification: n/a
Previous Handling Restrictions: n/a
Reference: 75 A-145, 75 DATED APRIL 19, 75 1975
Review Action: RELEASED, APPROVED
Review Authority: ShawDG
Review Comment: n/a
Review Content Flags:
Review Date: 24 NOV 2003
Review Event:
Review Exemptions: n/a
Review History: RELEASED <24 NOV 2003 by MaustMC>; APPROVED <30 DEC 2003 by ShawDG>
Review Markings:

Margaret P. Grafeld
Declassified/Released
US Department of State
EO Systematic Review
05 JUL 2006

Review Media Identifier:
Review Referrals: n/a
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
Secure: OPEN
Status: NATIVE
Subject: USSR LOFTS INDIAN-MADE SATELLITE
TAGS: TSPA, IN, NASA
To: STATE
Type: TE
Markings: Margaret P. Grafeld Declassified/Released US Department of State EO Systematic Review 05 JUL 2006